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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/804,556	03/12/2001	Jim Sundqvist	45687-00053 P5262US00/AE	1305
27045	7590	06/06/2005	EXAMINER	
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR C11 PLANO, TX 75024			ZHONG, CHAD	
			ART UNIT	PAPER NUMBER
			2152	

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/804,556

Applicant(s)

SUNDQVIST, JIM

Examiner

Chad Zhong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-22,31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,8-10,12-14,19-21,31 and 32 is/are rejected.
- 7) ☒ Claim(s) 4-7,11,15-18 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

FINAL ACTION

1. This action is responsive to communications: Amendment, filed on 11/16/2004. This action has been made final.

Claims 1-2, 4-22, 31-32 are presented for examination. In amendment A, filed on 11/16/2004: claims 1, 8, 12, 19, 31 are amended.

Applicant's remarks filed 11/16/04 have been considered but are moot in view at the new grounds of rejection necessitated by Applicant's amendment

2. It is noted that although the present application does contain line numbers in specification and claims, the line numbers in the claims do not correspond to the preferred format. The preferred format is to number each line of every claim, with each claim beginning with line 1. For ease of reference by both the Examiner and Applicant all future correspondence should include the recommended line numbering. Although this is not required by the MPEP, it is recommended by the examiner to place line numbers for the ease of reference and future amendments.

Claim Rejections - 35 USC § 112, second paragraph

Claim 8, 6, 17, 7, 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. The claim language in the following claims is not clearly understood:
 - i. As per claim 8, line 13, it is not clearly understood what is meant by 'manipulating sending times of', for the purposes of examination, it will be interpreted as 'manipulating sending times of data'
 - ii. As per claims 6, 17, it is not clearly understood what is meant by "internet layer", there is no such layer in the standard OSI layers, for the purpose of examination, the Examiner will consider TCP or transport layer

iii. As per claims 7, 18, it is not clearly understood what is meant by "window size is overwritten when the acknowledgment packet is in an physical layer". Specifically, window sizes is a transport layer or TCP protocol parameter, there is no window sizes performing any functionality in the physical layer. There is encapsulation on the physical layer and the packet is passed through, but to perform an override while in physical layer does not comply with the standards. For purpose of examination, the Examiner will consider "TCP or transport layer" in place of the "physical layer".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371 (c) of this title before the invention thereof by the applicant for patent.

4. Claims 1-2, 8-10, 12-14, 19-21, 31-32 are rejected under 35 U.S.C. 102(e) as being anticipated by DeMoney, US 6,721,789.

5. As per claim 1, DeMoney teaches a method for dynamically (Col. 14, lines 18-21, scheduler schedules the flows dynamically) controlling data flows to a terminal in a communications system which handles real-time application flows (Col. 13, lines 1-15, real time flows are video data, time and bandwidth intensive) and non real-time application flows (Col. 13, lines 1-15, non-time critical access i.e. FTP or NFS), said data flows being carried over at least one communications terminal with a predetermined limited bandwidth (Fig 7; Col. 13, lines 13-16, wherein the guaranteed rate client and available rate client have their predetermined limited bandwidth) and with use of at least one protocol (protocol here would be video protocol or FTP or NFS protocols), said method comprising the steps of:

receiving, in the terminal, a set-up message for a real-time application communications session

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(Col. 14, lines 5-10, wherein the setup messages are requests for bandwidth), wherein the set-up message contains encoding information indicating the encoding method to be used by a user (Col. 14, lines 5-10, lines 45-50, wherein the encoding information is the bandwidth requirement for a particular flow; Col. 9, lines 35-50, wherein the encoding information is the video bit rate);

Determining a required bandwidth for an incoming data flow for the real-time application using the encoding information (Col. 13, lines 25-30; Col. 14, lines 5-10, lines 60-65 wherein the required bandwidth information are the encoded information of the incoming bandwidth request for the real time flow);

controlling, before real-time data flow begin, a bandwidth usage on the communications connection of at least one data flow to a non real-time application on the terminal by manipulating at least one protocol parameter wherein the at least one protocol parameter is determined using the required bandwidth (Col. 14, lines 10-21, lines 60-65, the protocol parameter is the bandwidth allocated to the non-real time flows, this bandwidth is allocated to the real time flow upon real time flow requests).

6. As per claim 2, DeMoney teaches a method according to claim 1, wherein the controlling step involves reducing the bandwidth usage on the communications connection of the at least one data flow to a non real-time application in order to free bandwidth on the communications connection for the real-time application flow to be set up (Col. 13, lines 25-30; Col. 14, lines 5-10, lines 60-65).

7. As per claim 8, based on interpretation set above in the 112 2nd paragraph, claim 8 is rejected for the same reasons as rejection to claim 1 above for no additional limitations.

8. As per claim 9, Claim 9 is rejected for the same reasons as rejection to claim 2 above.

9. As per claim 10, DeMoney teaches a method according to claim 8, wherein said step of determining said required bandwidth is done by a real-time application from an encoding method

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chosen for the real-time communications session during the set up of said session (Col. 14, lines 5-10; Col. 9, lines 35-50);

the real-time application providing a flow control application with information regarding the required bandwidth (Col. 14, lines 5-20, flow control application here is the scheduler and bandwidth allocator 70); and

wherein the step of controlling the bandwidth usage of the at least one data flow from a non real-time application based on said information received from the real-time application, is done additionally by a flow control application (Col. 14, lines 5-20, flow control application here is the scheduler and bandwidth allocator 70).

10. As per claims 12-13, Claims 12-13 are rejected for the same reasons as rejection to claims 1-2 above respectively.

11. As per claim 19, claim 19 is rejected for the same reasons as rejection to claims 8 and 1 above.

12. As per claim 14, 21, Claims 14, 21 are rejected for the same reasons as rejection to claim 10 above.

13. As per claim 20, claims 20 is rejected for the same reasons as rejection to claims 2 above.

14. As per claim 31 and 32, claims 31 and 32 are rejected for the same reasons as rejections to claims 1-2 above respectively.

15. Claims 1-22, 31-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Vaid et al. (hereinafter Vaid), US 6,078,953.

16. As per claim 1, Vaid teaches a method for dynamically (Col. 13, lines 60 – Col. 14, lines 5, where

the flows are adjusted dynamically based on the policies set for them) controlling data flows to a terminal in a communications system which handles real-time application flows (Col. 7, lines 12-20; table 2; real time flows are video data, time and bandwidth intensive) and non real-time application flows (Col. 7, lines 12-20, non-time critical access i.e. mail and news), said data flows being carried over at least one communications terminal with a predetermined limited bandwidth and with use of at least one protocol (protocol here would be TCP or HTTP protocols for instance), said method comprising the steps of:

receiving, in the terminal, a set-up message for a real-time application communications session (Col. 4, lines 55-65; Col. 5, lines 34-37; wherein the setup messages are requests for bandwidth for a particular application, video or mail for instance), wherein the set-up message contains encoding information indicating the encoding method to be used by a user (Col. 16, lines 10-15, lines 29-35; Col. 7, lines 12-50);

Determining a required bandwidth for an incoming data flow for the real-time application using the encoding information (Col. 4, lines 42-67; Col. 8, lines 22-35, wherein the required bandwidth information are the encoded information of the incoming bandwidth request for the real time flow);

controlling, before real-time data flow begin, a bandwidth usage on the communications connection of at least one data flow to a non real-time application on the terminal by manipulating at least one protocol parameter wherein the at least one protocol parameter is determined using the required bandwidth (Col. 18, lines 12-45; Col. 13, lines 55 – Col. 14, lines 5, the protocol parameter is the bandwidth allocated to the non-real time flows, this bandwidth is allocated to the real time flow upon real time flow requests).

17. As per claim 2, Vaid teaches a method according to claim 1, wherein the controlling step involves reducing the bandwidth usage on the communications connection of the at least one data flow to a non real-time application in order to free bandwidth on the communications connection for the real-time

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application flow to be set up (Col. 13, lines 65 – Col. 14, lines 5).

18. As per claim 8, based on interpretation set above in the 112nd paragraph, claim 8 is rejected for the same reasons as rejection to claim 1 above for no additional limitations.

19. As per claim 9, Claim 9 is rejected for the same reasons as rejection to claim 2 above.

20. As per claim 10, Vaid teaches a method according to claim 8, wherein said step of determining said required bandwidth is done by a real-time application from an encoding method chosen for the real-time communications session during the set up of said session (Col. 7, lines 12-50);

the real-time application providing a flow control application with information regarding the required bandwidth (Col. 7, lines 12-50; Fig 5, item 505, wherein the terminal 505 is the flow control application); and

wherein the step of controlling the bandwidth usage of the at least one data flow from a non real-time application based on said information received from the real-time application, is done additionally by a flow control application (Col. 13, lines 65 – Col. 14, lines 5, flow control application 505 has policies which controls the bandwidth allocation adjustments).

21. As per claims 12-13, Claims 12-13 are rejected for the same reasons as rejection to claims 1-2 above respectively.

22. As per claim 19, claim 19 is rejected for the same reasons as rejection to claims 8 and 1 above.

23. As per claim 14, 21, Claims 14, 21 are rejected for the same reasons as rejection to claim 10 above.

24. As per claim 20, claims 20 is rejected for the same reasons as rejection to claims 2 above.

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25. As per claim 31 and 32, claims 31 and 32 are rejected for the same reasons as rejections to claims 1-2 above respectively.

26. As per claim 4, Vaid teaches a method according to claim 1, wherein by controlling the bandwidth usage of the at least one data flow to a non real-time application flow comprises:

investigating if a data packet to be sent from the terminal is an acknowledgment packet;

if the data packet is an acknowledgment packet, determining by comparing a window size of the acknowledgment packet to information based on said required bandwidth if the window size should be reduced, which window size defines a maximum amount of unacknowledged data packets that a receiver of the acknowledgment packet should be allowed to send to the terminal on the data flow with which the acknowledgment packet is associated; and

reducing the window size, when such has been determined, by overwriting the window size with a lower value before sending said acknowledgment packet to the receiver (Col. 18, lines 10-45, wherein the receiver adjusts the amount of information that the sender is able to send through the usage of window sizes).

27. As per claim 5, Vaid teaches a method according to claim 4, wherein the step of reducing the window size comprises overwriting the window size when the acknowledgment packet is in a transport layer (Col. 18, lines 10-45).

28. As per claim 6, Vaid teaches a method according to claim 4, wherein the step of reducing the window size comprises overwriting the window size when the acknowledgment packet is in an Internet layer (Col. 18, lines 10-45, wherein Internet layer is being interpreted as the transport layer).

29. As per claim 7, Vaid teaches a method according to claim 4, wherein the step of reducing the window size comprises overwriting the window size when the acknowledgment packet is in a physical

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layer (Col. 18, lines 10-45, wherein physical layer is being interpreted as the transport layer).

30. As per claims 11, 15, 22, claims 11, 15, 22 are rejected for the same reasons as rejection to claim 4 above.

31. As per claim 16-18, claims 16-18 are rejected for the same reasons as rejection to claims 5-7 above respectively.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reined of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents and publications are cited to further show the state of the art with respect to "Method And Arrangement For Control Of Non Real-Time Application Flows In A Network Communications System".

- i. "BTU: A communication Benchmark Proposal" – Maly et al. June 1995

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- ii. US 5193151 Jain
- iii. "Decoupling Control From Data for TCP Congestion Control" Shie-Yuan Wang
September 1999.
- iv. "Automatic TCP Buffer Tuning", Semke et al., Computer Communications Review, a
publication of ACM SIGCOMM, volume 28, number 4, October 1998

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chad Zhong whose telephone number is (571)272-3946. The examiner can normally be reached on M-F 7:15 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BURGESS, GLENTON B can be reached on (571)272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CZ
May 25, 2005


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